



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,854	04/15/2004	Chien-Chao Huang	24061.150/TSM2003-0964	6844
42717	7590	08/29/2006	EXAMINER	
HAYNES AND BOONE, LLP 901 MAIN STREET, SUITE 3100 DALLAS, TX 75202			DICKEY, THOMAS L	
			ART UNIT	PAPER NUMBER
			2826	

DATE MAILED: 08/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action  
Before the Filing of an Appeal Brief**

Application No.

10/824,854

Applicant(s)

HUANG ET AL.

Examiner

Thomas L. Dickey

Art Unit

2826

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 11 August 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.  
b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).


4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: 17-27.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). \_\_\_\_\_  
13. ☐ Other: \_\_\_\_\_.



Thomas L. Dickey  
Primary Examiner  
Art Unit: 2826

Continuation of 11. does NOT place the application in condition for allowance because:

It is argued, at page 2 of the remarks, that "The Examiner asserts that Applicant's specification and drawings teach that '... sill 250a 'may' be formed inside feature 250, but 'alternately' may be a plurality of layers formed on biasing feature 250.'" Unfortunately, Applicants quoted the Examiner out of context. What the Examiner actually said was,

Applicants' specification and drawings show a two-part electrode consisting of contact 240c and sill 250a, for supplying charge to biasing feature 250 (Note that sill 250a "may" be formed inside feature 250, but "alternately" may be a plurality of layers formed on biasing feature 250). Note figure 2 and paragraphs 0030-0033 of the instant application.

Note page 7 of the paper mailed 7/18/06. It seems to the Examiner to be a losing proposition to quote a person out of context when his original remarks are a matter of public record. In fact (repeating the examiner's 7/18/06 findings) it is Applicants' paragraphs 0030-0033 that provide the quoted facts.

It is argued, at page 2 of the remarks, that "the Examiner is importing language from the specification into Claim 17, in an attempt to establish that the phrase 'a sill located within the electrode' is actually much broader than it appears on its face" It seems to the Examiner, however, that the unembellished language, "a sill located within the electrode" is already much broader than the particular embodiment suggested by the Examiner. For example, "a sill located within the electrode," could have meanings as diverse as: a) a sill formed in a trench formed in the electrode, b) a sill formed from an implant region within the electrode, c) a sill formed as a diffusion region in the electrode, d) a sill formed as a region of small cracks and crystal dislocations within the electrode, or e) a sill formed as a stoop or projection on the outside of the electrode. There are no doubt several other meanings for "a sill located within the electrode." In suggesting that "a sill located within the electrode," is capable of reading on one or more of a series of layers forming said electrode, the Examiner simply asserts that a reasonable reading of the language claiming the sill is at least that broad. The Examiner does not suggest that "sill" should be restricted to any single meaning.

It is argued, at page 3 of the remarks, that "the Examiner asserts that Figure 2 of Lin [sic] is so similar to Figure 2 of the present application that it would be impossible to conclude that Figure 2 of Lin does not disclose a sill located within an electrode." Here, again, Applicants take the Examiner out of context. The full text of the Examiner's remarks was:

Applicants' specification and drawings show a two-part electrode consisting of contact 240c and sill 250a, for supplying charge to biasing feature 250 ... [citation] Lin et al. show the same two-part electrode (parts 240b and 260b in Lin et al.) for supplying current to semiconductor feature 230b. [citation] Given that we are mandated during examination to give Applicants' claims the broadest reasonable interpretation consistent with Applicants' disclosure (and given the close similarity between Lin's electrode 240b-260b and Applicants' disclosed electrode 240c-250a) it is impossible to conclude that Applicants' claimed electrode/sill combination is not met by the two-part electrode including a sill, as disclosed by Lin et al.

See page 7 of the paper mailed 7/18/06.

It is argued, at page 3 of the remarks, that "With reference to paragraph 32 and Figure 2 in the present application, Figure 2 discloses a biasing feature 250 (such as a transistor gate electrode [it should be noted that nowhere in applicants' specification as filed is biasing feature 250 identified as an electrode The identification of feature 250 as an electrode is an invention which should be credited to applicants' attorney]) that is made of a conductive material." However, Applicants' claim 17 does not require the electrode within which the claimed sill is formed to be "made of a conductive material." As noted parenthetically, the only conductive material is in biasing feature 250 in Applicants' specification, which Applicants' attorney asks us to take on faith is an electrode. Concluding that claim 17 requires the claimed electrode to be made of a conductive material and not a semiconductor would be (to borrow a phrase from Applicants) "importing language from the specification" into Claim 17, in an attempt to establish that the term "electrode" is actually much narrower than it appears on its face. Besides, Lin et al.'s electrode 240b-260b includes layer 240b, which "may comprise Ti, Ta, Mo, Ni, TiN, TaN, CoSi, TiSi, TaSi, MoSi, NiSi, and/or other conductive materials." Note paragraph 0029 of Lin et al.

Why should the "biasing feature 250" of Applicants' specification be identified as the claimed electrode? It is never identified as such in Applicants' specification. In Applicants' specification, "third contact 240c" is layered over "sill 250a," to combine to supply current to biasing feature 250. Why should Applicants' layers 250a and 240c not be identified, in combination, as the claimed electrode?

It is argued, at page 4 of the remarks, that "However, as evident from paragraphs 51-54 and 67, Figure 2 of Montgomery [sic] discloses a first embodiment, Figure 3 discloses a second embodiment, Figures 4 and 16 disclose a third embodiment, and Figures 5 and 18 disclose a fourth embodiment." However, Applicant ignores the fact that in paragraph 0054 Montgomery et al. specifically state "In each of the embodiments of FIGS. 2-5, layer 10 can be thought of as the 'body' region of the modulator device and regions 12, 20, 22 or 24 can be thought of as the 'gate' region of the modulator device." In other words, except for having gate dielectrics of different shapes (note that Applicants' claim 17 does not distinguish between gate dielectric shapes), Montgomery et al.'s disclosure of the relationship between gate (12,20,22, or 24), gate dielectric 18, and body 10 is identical in each of Figures 2-5. Furthermore, in paragraph 0067 Montgomery et al. specifically state that the Figure 18 "embodiment" is nothing more than a "variation" of the Figure 17 "embodiment," which in turn is a mere "variation" of the Figure 16 embodiment. The Examiner cites Figure 18 because it shows a particular feature of the Figure 16 embodiment not specifically shown in Figure 16. There is no need to combine alternative embodiments, because in fact the cited figures merely show specific details of a single embodiment.

Applicant goes on to argue, "To the extent that the present Office Action is combining multiple embodiments from Montgomery [sic], the present Office Action needs to carry the burden of establishing a prima facie case of obviousness..." Because there is no need to combine "multiple embodiments," this issue is moot.

It is argued, at page 5 of the remarks that "Persons skilled in the art are well aware of what a transistor is..." However, finding the state of awareness of persons of skill in the art requires a finding of fact. Findings of fact require objective evidence. Applicants' page 5 argument takes the form of attorney argument. The arguments of counsel cannot take the place of evidence in the record. In re Schulze, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). See MPEP §§ 716.01(c), 2145.

It is further argued, at page 5 of the remarks, that "Montgomery [sic] discloses electro-optic modulators, not a "transistor" as recited in Claim 17." As explained above, Montgomery et al.'s device includes a gate region 22 to overlie a body region 10, with a relatively thin dielectric layer 18 interposed between the contiguous portions of the gate and body regions, to allow voltage imposed on the gate region to modulate (note figure 18) current flowing from "source" contact 42-1 to "drain" contact 42-2. The gate, body, and relatively thin dielectric layer, as well as the ability to modulate a current using an applied voltage, identify the disclosed structure as a transistor.

In the Examiner's view, Applicants are naïve in their insistence that Montgomery et al.'s device is an electro-optic modulator but not a transistor. The flow of charge into and out of the Montgomery et al.'s device controls the optics, but something in turn has to control the flow of charge into and out of the device. The "charge-flow-controller" is a transistor. Applicant's position is a bit like saying, "such-and-such is no transistor, it is a DRAM," or saying, "such-and-such is no transistor, it is an LCD television," or "such-and-such is no transistor, it is an electronic automobile ignition," or "such-and-such is no transistor, it is a wireless telephone," or "such-and-such is no transistor, it is a CPU." Builders of these devices may not refer to them as "transistors," but they all include transistors and rely on transistors in order to function.